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AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method of replicating a nucleic acid array, the method comprising:

(a) manufacturing a template nucleic acid array by immobilizing on a surface of a first substrate first nucleic acid probes, each of which includes a first polynucleotide that has a sequence complementary to a second polynucleotide to be synthesized and a primer binding site;

wherein immobilizing one of the first nucleic acid probes comprises bringing a protruding portion of the first substrate into contact with a solution of the first nucleic acid probe filling a recessed portion of another uneven substrate such that the first nucleic acid probe is immobilized on the surface of the protruding portion of the first substrate;

(b) binding a primer to the primer binding site of each of the first nucleic acid probes immobilized on the surface of the first substrate of the template nucleic acid array;

(c) in-situ synthesizing the second polynucleotide initiating from the primer using the first polynucleotide as a template; and

(d) transferring second nucleic acid probes, each of which includes the second polynucleotide and the primer, to a second substrate from the first substrate.

2. (Original) The method of claim 1, wherein the first and second substrates are previously patterned or surface-treated.

3. (Currently amended) The method of claim 2, wherein a metallic pattern is formed as a result of patterning, and

a functional group or a material that can bind to a terminal of a nucleic ~~acids~~ acid to be immobilized on the first or second substrate is attached as a result of the surface treatment.

4. (Original) The method of claim 3, wherein each of the functional group and the material is independently selected from the group consisting of aldehyde, streptavidin, and thiol.

5. (Original) The method of claim 1, wherein the primer is a universal primer.

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6. (Previously presented) The method of claim 1, further comprising attaching to a terminal of the primer a functional group or a material that can bind to a surface of the second substrate.

7. (Original) The method of claim 1, further comprising cleaving hydrogen bonds between the first and second polynucleotides before step (d).

8. (Original) The method of claim 1, wherein steps (b) through (d) are repeated using the template nucleic acid array to produce a number of nucleic acid arrays.

9. (Previously presented) The method of claim 1, wherein the first substrate is previously patterned.

10. (Previously presented) The method of claim 9, wherein the second substrate is previously patterned.

11. (Previously presented) The method of claim 10, wherein the first and second substrates are previously surface-treated.

12. (Previously presented) The method of claim 1, wherein the primers are identical in sequence.

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13. (Previously presented) A method of replicating a nucleic acid array, the method comprising:

(a) immobilizing first nucleic acid probes on a surface of a previously patterned first substrate to manufacture a template nucleic acid array,

wherein each of the first nucleic acid probes includes a first polynucleotide that has a sequence complementary to a second polynucleotide to be synthesized and a primer binding site;

wherein immobilizing one of the first nucleic acid probes comprises

filling a recessed portion of another uneven substrate with a solution of a first nucleic acid probe, and

bringing a protruding portion of the first substrate into contact with the solution such that the first nucleic acid probe is immobilized on the surface of the protruding portion of the first substrate;

(b) binding a plurality of primers to the primer binding sites of the immobilized first nucleic acid probes;

(c) in-situ synthesizing the second polynucleotide, initiating from at least one of the primers using the first polynucleotide as a template; and

(d) transferring second nucleic acid probes, each of which includes the second polynucleotide and the primer, to a second substrate from the first substrate.